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DOUBLE-CLICKING A POINT-AND-CLICK USER INTERFACE APPARATUS TO ENABLE A NEW INTERACTION WITH CONTENT REPRESENTED BY AN ACTIVE VISUAL DISPLAY ELEMENT

BACKGROUND OF THE INVENTION

1. Field of the Invention

This invention relates to the use of user interface apparatus and, in particular, to the use of point-and-click user interface apparatus.

2. Related Art

A mouse is commonly used as a user interface device to effect interaction with a computer. A mouse is constructed 15 with one or more movable sections that can be moved by a finger of a user of the mouse when the user grasps the mouse with the user's hand. The movable section(s) are often constructed so that a clicking noise is produced when a movable section is moved, so that movement of a movable 20 section of a mouse is commonly referred to as a "click" or as "clicking" the mouse. Typically, a mouse includes a "left-click movable section" that is positioned on the left side of the mouse (as the user faces the mouse when the mouse is positioned in the intended orientation) and a 25 "right-click movable section" that is positioned on the right side of the mouse. Movement of the left-click movable section is referred to as a "left-click" or as "left-clicking" the mouse. Movement of the right-click movable section is referred to as a "right-click" or as "right-clicking" the 30 mouse. Two clicks in rapid succession of a movable section of a mouse is referred to as a "double-click" or as "doubleclicking" the mouse. A mouse can be used to produce an input to a computer in accordance with the position on a visual display device of the computer of a cursor element 35 controlled by the mouse, the manner of clicking the mouse, and a computer program (e.g., operating system, application program) to which the mouse input is being provided. For example, a single left-click can produce one type of input to a computer program, a single right-click can produce 40 another type of input to the computer program, and a double left-click can produce still another type of input to the computer program. Further, those same types of clicking can produce different types of inputs to a different computer program.

A mouse is a particular example of a general class of computer user interface apparatus that is referred to herein as point-and-click computer user interface apparatus. Point-and-click computer user interface apparatus can enable a computer user to position a cursor element on a display screen of a visual display device of a computer to select an active visual display element and click a movable part of the apparatus to effect an interaction with the content represented by the active visual display element in accordance with the particular manner of clicking. Point-and-click computer user interface apparatus can also be implemented by, for example, a trackball (for positioning the cursor element) and associated pushbutton mechanism(s) (for clicking).

For many computer programs, user input to the computer program using a point-and-click computer user interface 60 apparatus is effected using single-clicks. (For such computer programs, multiple clicks—including a double-click—are interpreted as a single-click.) A computer program for browsing the World Wide Web ("Web browser") is an example of a computer program for which user input using 65 a point-and-click computer user interface is effected in this manner. For example, when using the Internet Explorer Web

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browser produced by Microsoft Corporation, a single leftclick when a cursor element is positioned to enable selection of (i.e., "clicking on") a part of a Web page designated as a "link" results in display of a new Web page corresponding to the link in the same browser window in which the original Web page was displayed. A single left-click when a cursor element is positioned to enable selection of a part of a Web page designated as a "link," while depressing the <Shift> key on a keyboard, results in display of a new Web page corresponding to the link in a new browser window that is different from the browser window in which the original Web page was displayed. A single right-click can cause display of a menu including choices which can depend on the nature of the part of the Web page which is selected by the position of the cursor element. For example, if the part of the Web page is a link, the menu of choices can enable, for example, display of a new Web page corresponding to the link in the same or a new browser window; if the part of the Web page is an image, the menu of choices can enable, for example, printing, saving, or electronically mailing the image, or using the image as "wallpaper;" and if the part of the Web page is a display of a short video clip, the menu of choices can enable, for example, zooming the display of the video clip in or out, changing the quality of the display of the video clip, or replaying, rewinding or fast-forwarding the display of the video clip.

Some computer programs for displaying audio and/or video content ("media players") are also examples of a computer program for which user input using a point-andclick computer user interface is effected using single-clicks. A single left-click can be used to select content for display by the media player or to control basic operation (e.g., start, stop, pause, rewind, fast forward) of the media player. A single right-click can cause display of a menu including choices for interacting in a particular manner (e.g., zooming the visual display in or out, pausing or restarting the display, muting the audio display) with content being displayed by the media player. (A left-click is used to select a menu choice.) The content is represented by a single version of data that is the same for all interactions with the content that can be selected using the point-and-click computer user interface apparatus. The RealPlayer and RealOne video players produced by RealNetworks, Inc. are examples of a media player that operates in the above-described fashion.

Double-clicking a point-and-click computer user interface apparatus can also be used to effect user input to a computer program. For example, in an interactive operating system based on the WIMP paradigm (Window, Icon, Mouse, Pointer), such as the Windows operating system produced by Microsoft Corporation, execution of a computer program can be started by double-clicking a point-and-click computer user interface apparatus when a cursor element is positioned to enable selection of a display icon representing the computer program, or a file can be opened by double-clicking a point-and-click computer user interface apparatus when a cursor element is positioned to enable selection of a display icon or text representing the file. However, double-clicking has not been used to effect user input to a Web browser that uniquely corresponds to the double-click input.

Additionally, computer programs implemented to make use of the Object Linking and Embedding (OLE) capability in some versions of the Windows operating system can effect particular control in response to double-clicking a point-and-click computer user interface apparatus. When interacting with a file using a first computer program, double-clicking a point-and-click computer user interface apparatus when a cursor element is positioned to enable selection of an